

PATENT COOPERATION TREATY

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INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

To:

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TO:

TO: KH 1314

CASE NUMBER

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WRITTEN OPINION

(PCT Rule 66)

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A01N25/20

Applicant

RECKITT BENCKISER (AUSTRALIA) PTY LIMITED

- This written opinion is the **first** drawn up by this International Preliminary Examining Authority.
- This opinion contains indications relating to the following items:
 - ☒ Basis of the opinion
 - ☐ Priority
 - ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
 - ☐ Lack of unity of invention
 - ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
 - ☐ Certain documents cited
 - ☐ Certain defects in the international application
 - ☐ Certain observations on the international application
- The applicant is hereby **invited to reply** to this opinion.

When? See the time limit indicated above. The applicant may, before the expiration of that time limit, request this Authority to grant an extension, see Rule 66.2(d).

How? By submitting a written reply, accompanied, where appropriate, by amendments, according to Rule 66.3. For the form and the language of the amendments, see Rules 66.8 and 66.9.

Also: For an additional opportunity to submit amendments, see Rule 66.4.
For the examiner's obligation to consider amendments and/or arguments, see Rule 66.4 bis.
For an informal communication with the examiner, see Rule 66.6.

If no reply is filed, the international preliminary examination report will be established on the basis of this opinion.
- The final date by which the international preliminary examination report must be established according to Rule 69.2 is: 15.11.2004

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I. Basis of the opinion

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this opinion as "originally filed"*):

Description, Pages

1-11 as originally filed

Claims, Numbers

1-51 as originally filed

Drawings, Sheets

1/2-2/2 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:
- ☐ the drawings, sheets:

5. ☐ This opinion has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

6. Additional observations, if necessary:

V. Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**1. Statement**

Novelty (N)	Claims	1-14, 17, 28, 30, 32, 34, 35, 37, 38, 40-42, 44, 49-51 NO; 15, 16, 18-27, 33, 45-48 YES
Inventive step (IS)	Claims	1-51 NO
Industrial applicability (IA)	Claims	1-51 YES

2. Citations and explanations**see separate sheet**

1) Reference is made to the following documents:

- D1: CH 295 917 A (GEIGY AG J R) 31 January 1954 (1954-01-31)
- D2: GB-A-2 262 231 (CHOU HOWARD ;YAP MIN CHEONG (MY)) 16 June 1993 (1993-06-16)
- D3: US-A-5 447 713 (ELSNER THOMAS ET AL) 5 September 1995 (1995-09-05)
- D4: WO 02 11537 A (BOSWORTH MARGARET LEE ;RECKITT BENCKISER AU PTY LTD (AU); RECKITT) 14 February 2002 (2002-02-14)

2) The present application relates to moulded combustible products that emanate a pesticide into the atmosphere, undergoing combustion for a prolonged period thereby providing an extended time period of pesticidal activity. The application particularly relates to mosquito coils.

3) Re Item V

3.1 Novelty (Art. 33(2) PCT)

The attention of the Applicant is drawn to the fact the present set of claims contains serious deficiencies of clarity (Article 6 PCT), which directly affect the outcome of the substantive examination in terms of novelty. Said deficiencies are listed here below, so that the Applicant clearly understands the result of the following examination as for novelty.

- Claims 1-7 and 51 are defined, if not completely at least partially, as "product by process" claims. Novelty cannot be conferred on a claim which is drafted as a "product-by-process" claim when no novelty exists in such product *per se*. In this connection, once the product itself is part of the state of the art and is not novel according to the criterion of novelty as set out in Article 33(2) PCT, the fact of defining this product by reference to a new process is irrelevant to the question of novelty, insofar as there is not evidence that the given process yields a product which can be regarded as different from the one described in the prior art. It follows that "product-by-process" claims are interpreted in an absolute sense, e.g. in claims 1-6 a moulded pulp will be considered, regardless how it has been moulded or formed.

- Claim 8 is unclear for three reasons: it relates to a method for making a moulded product but it does not really define any method; all the claims dependent upon Claim 8 are product

claims and not method claims; and the term "preferably" is not limiting, thus the claim is to be understood as comprising any insecticide.

- Claims 8 and 9 give a list of insecticides wherein pyrethroids are cited next to compounds which are commonly considered to belong to the group of pyrethroids (e.g. esbiothrin, d-allethrin, prallethrin, transfluthrin, bioallethrin, esbioallethrin, and pyrethrins). This raises a doubt about the meaning of the feature "pyrethroid" in the application.

- Claim 12 depends upon Claim 9, however, its scope appears not to be fully contained within that of Claim 9. The same applies for Claim 18 in relation to Claim 7.

- Claims 17 and 20 disclose particular embodiments of the alkali earth metal nitrates, nitrites, carbonates, and bicarbonates mentioned in Claim 7. It appears however, that sodium and potassium are not alkali earth metals but alkali metals. Thus, it is not clear what the Applicant means by "alkali earth metal" in Claim 7.

- Claims 40 and 41 indicate that other components "can" be added to the product or applied as a coating. This does not necessary means that the said components are added or applied as a coating, thereby resulting in that the scope of claims 40 and 41 is exactly the same as the one of the claims upon which they depend. Claims 40 and 41 are thus redundant.

- Claim 44 is redundant with Claim 42 since the feature "or other configurations" is not limiting.

- Claims 49 and 50 rely on references to the figures and examples, which is generally not allowed (Guidelines C-III, 4.10 PCT). Additionally they contain the relative feature "substantially", that renders their scope even more unclear.

Taking into account the raised objections upon clarity (Article 6 PCT), the subject-matter of present claims 1-14, 17, 28-32, 34-44, and 49-51 cannot be regarded as novel in the light of documents **D1-D4**:

Document **D1** relates to (cf. col. 1 and examples) the preparation of combustible insecticidal coils containing un insecticide (e.g. pyrethrin), starch, cellulose and an alkali nitrate. The use of cellulose and starch instead of wood-dust and cereal flour improves

elasticity and resistance to breakability of the coil and diminishes the bad smell of the smoke generated. The content of **D1** anticipates the subject-matter of claims 1-14, 17, 28, 30, 32, 34, 35, 37, 38, 40-42, 44, and 49-51.

Document **D2** discloses (cf. abstract; pg. 1, l. 6-20; pg. 2, l. 9-12; and pg. 2, l. 18-20) a insect repellent coil made of a combustible hydrocarbon material. In its discussion of the prior art, **D2** mentions conventional mosquito coils comprising organic material in powder form blended with binder agents and active ingredients. The organic material includes a combination of wood, coconut shell, flour made from leaves, pyrethrum marc, and other nutshells. A burning promotion agent such as potassium nitrate is added to enhance the burning process and the commonly used active ingredients include preferably d-allethrin or d-trans-allethrin. The coils are predetermined for a duration of preferably 8-10 hours. Therefore, the products claimed by present claims 1-6, 8-14, 17, 28, 30, 32, 34, 35, 37, 38, 40-44, and 49-51 are not novel.

Document **D3** shows (cf. abstract; col. 1, l. 41-43 and 50-68; col. 2, l. 17-22, 43-44, and 52-56) mosquito coils resistant to breakage consisting of wood-chip and/or fibre material of a density of 0.4-0.7 kg/dm³, particularly 0.5 kg/dm³, and having a preferred thickness of 1-4.5 mm, in particular mm. The active substance is applied to the spiral as a layer, preferably by means of rollers. The burning duration is adjusted by addition of oxidising auxiliaries such as potassium nitrate. **D3** renders the subject-matter of claims 1-6, 8, 17, 28-30, 34, 35, 37-42, 44, and 49-51 not novel.

Document **D4** describes (cf. abstract; pg. 3, l. 16-22; pg. 4, l. 1-3, 7-8, 11-12, 15-16, and 20-22) a combustible insecticidal coil formed from cardboard impregnated with one or more insecticides. The thickness of the cardboard is within the range 0.75-3.8 mm and the width is preferably of 6-7 mm. In a preferred embodiment, the overall length of the coil is 72 cm and it burns for 8 hours. To achieve appropriate burn-times it is preferred that the cardboard has a density of 600-700 kg/m³. In view of **D4**, claims 1-6, 8, 17, 28, 30-32, 34-44, and 49-51 cannot be regarded as novel.

Accordingly, only claims 15, 16, 18-27, 33, and 45-48 may be considered to be novel. The following substantive examination in terms of inventive step has been therefore restricted to said claims.

3.2 Inventive Step (Art. 33(3) PCT)

D1 and **D3** are regarded as the closest state of the art. The remaining novel subject-matter of the application differs from **D1** and **D3** in the presence of certain additives in the coil (e.g. alkali earth carbonates, sodium silicate, etc) or in the particular concentration in the coil of additives already present in **D1** and **D3** (e.g. potassium nitrate). However, said difference does not seem to provide any unexpected effect. The distinguishing features appear to merely consist of commonly used additives in the art, for the routine adjustment of the burning properties of the coils. It is therefore, at present, not possible to acknowledge an inventive step for the present application.

3.3 Industrial applicability (Art. 33(4) PCT)

Is acknowledged for the whole set of claims.

4) Further comments:

- It seems that figures 3a, 3b, and 4 have not been filed. The passages in the description and the claims referring to them should be therefore deleted (Articles 5 and 6 PCT).
- The vague and imprecise statement in the description on page 11, l. 16-20 implies that the subject-matter for which protection is sought may be different to that defined by the claims, thereby resulting in lack of clarity (Article 6 PCT) when used to interpret them (see also the PCT Guidelines, III-4.3a).